

REMARKS

Upon entry of the present Amendment Claims 40-49 are present in the case. Paragraph [0008] of the descriptive portion of the specification has been amended. In view of the foregoing amendments to the descriptive portion of the specification and to the claims, and the present remarks, applicants request entry of the present Amendment, reconsideration and withdrawal of the rejections and objections of the pending Office Action, and allowance of all claims present in the case at an early date.

Paragraph [0008]

The pending Office Action states in part 1 thereof that the “substitute specification filed 7-27-06 has not been entered because ... it raises questions of new matter.” This statement is not understood because the response of 7-27-06 did not include submission of a substitute specification. Rather, the response of 7-27-06 included amendments to the claims, the drawings, and one paragraph of the descriptive portion of the specification, namely, paragraph [0008]. Further, it is obvious from the Office Action that the amendments to the claims and to the drawings have been in fact entered. Further, the Office Action indicates that the “description of structural features shown in the Figures ... is fine,” but merely objects that “the description of benefits/advantages of such features (e.g. it can be stacked, page 4) is considered new matter.” Therefore, it can only be concluded that the Office Action has simply not entered the amendments to paragraph [0008] that were part of the response of 7-27-06, based solely on the assertion that the addition therein of “the description of benefits/advantages ...” constitutes new matter. The present Amendment treats paragraph [0008] as if it had not been previously amended, and presents changes to that paragraph, including addition of

the description of the structural features as not objected to by the Office Action, but not adding any of the objected-to “description of benefits/advantages of such features.” It is respectfully asserted that paragraph [0008] as amended herein adds no new matter and should be accepted without objection.

Claim Rejections under 35 USC 112

Claims 25, 29-32 and 36-39 have been rejected under 35 USC 112, first paragraph, as allegedly containing subject matter not in the specification. Specifically, the Office Action asserts that the claims in question “require the dynamic seal [20] to be a combination of an elastomer AND aramid fiber filled HNBR or (bronze/carbon filled PTFE, or plastic and PTFE/etc)” whereas “the specification only appears to describe the dynamic seal to be made of either PTFE, carbon filled PTFE, bronze filled PTFE, or aramid fiber filled HNBR” and “does not seem to describe one of these elements in combination with an elastomer or plastic.” The Office Action also rejects the same claims under 35 USC 112, second paragraph, as being indefinite, with the Office Action questioning whether the claimed dynamic seal as shown and described as “only element 20” or “the leg and element 20.”

1. Contrary to the assertions of the Office Action in the matter of the rejection under the first paragraph of 35 USC 112, paragraph [0008] of the specification states that the “present invention power end seal 10 is a composite seal that optimizes the properties of elastomers, and of plastic or elastomer composite materials.” Again, “the present invention power end seal 10 includes an inner diameter dynamic seal 20 comprising a plastic or elastomer filled composite material and the outer diameter rubber static seal 22.” Thus, the inner diameter dynamic seal 20 is made of plastic filled composite material, or of elastomer filled

composite material. This disclosure is repeated where paragraph [0008] refers to the “inner dynamic seal 20 being comprised of a plastic or elastomer filled composite material.” There, the paragraph lists example ingredients of the filled composite materials as “PTFE, bronze filled PTFE, carbon filled PTFE or aramid fiber filled HNBR (rubber),” which are combined with an elastomer or with a plastic to produce the filled composite material that makes up the dynamic seal 20. Thus, the inner diameter dynamic seal 20 is disclosed in the descriptive portion of the specification as being comprised either of plastic filled composite material, such as plastic and PTFE, plastic and bronze filled PTFE, plastic and carbon filled PTFE, or plastic and aramid filled HNBR, or of elastomer filled composite material, such as elastomer and PTFE, elastomer and bronze filled PTFE, elastomer and carbon filled PTFE, or elastomer and bronze filled HNBR. This disclosure information is consistent with the rejected claims as well as with the pending Claims 40-49.

Based upon the foregoing analysis and comparison of the descriptive portion of the specification and specific claim language, several embodiments of the material composition of the dynamic seal 20 as disclosed in the descriptive portion of the specification are expressly recited in the respective, rejected claims as well as the pending claims. Therefore, the rejected claims and the pending Claims 40-49 are in compliance with the requirements of 35 USC 112, first paragraph, and Applicants respectfully request that these rejections be withdrawn.

2. In the matter of the rejections under the second paragraph of 35 USC 112, the Office Action asserts that the claims in question are unclear. Unfortunately, this rejection is unclear. The Office Action does not identify any language in the claims that is supposedly unclear, and that would cause the Office Action to ask whether the claimed dynamic seal is the element 20, or the element 20 and “the

leg.” At the outset, the term “leg” is not used in the claims or in the descriptive portion of the specification. Applicants presume that the Office Action is referring to the inner wall 16, but should not have to make such a presumption. In any event, in each of the rejected claims in question, the dynamic seal is clearly identified. The claims go on to place the dynamic seal “within an inner diameter of said inner wall portion” (Claim 25), or “within an inner diameter surface of said inner wall portion” (Claim 26 from which Claims 29-32 depend; and Claim 33 from which Claims 36-39 depend). Further, these claim descriptions of the placement of the dynamic seal 20 are supported by Fig. 2, for example, which shows the dynamic seal 20 in contact with an inner diameter, or surface, of the inner diameter wall portion 16. New Claims 40-49 describe “a dynamic seal” that is “affixed to the inner diameter surface of said inner wall portion and to said seat portion” (Claims 40 and 45 from which all other claims depend). It is clear that the inner wall 16 is one thing and that the dynamic seal 20 is another thing, and that the dynamic seal is affixed to the inner wall, still leaving two things that have simply been joined together. Applicants are at a loss as to how this can be unclear.

An applicant cannot be expected to respond to a rejection that is not completely and clearly stated. In any event, the claims in question clearly identify what is being claimed as the dynamic seal, and are therefore in compliance with the requirements of 35 USC 112, second paragraph. Applicants respectfully request that these rejections be withdrawn and that Claims 40-49 be allowed. If these rejections are repeated, Applicants request that the rejections be clearly stated, identifying the actual claim language that is causing the supposed confusion and making clear why the supposed confusion exists.

Objection under 37 CFR 1.75

The Office Action states that Claim 33 would be objected to under 37 CFR 1.75 if Claim 26 would be found allowable, with the assertion that Claim 33 is a substantial duplicate of Claim 26. Both Claims 26 and 33 have been canceled. The only independent claims pending are new Claims 40 and 45. Claim 40 includes “a dynamic seal in the form of a filled composite material having an elastomer as one of its ingredients” and Claim 45 includes “a dynamic seal in the form of a filled composite material having a plastic as one of its ingredients.” An elastomer and a plastic being distinguishable types of ingredients, Claim 40 and Claim 45 are now mutually distinguishable. Thus, there are no grounds for an objection under 37 CFR 1.75 regarding Claims 40 and 45. Therefore, Applicants respectfully request that the objection be withdrawn.

Claim Rejections under 35 USC 103(a)

Claims 26-28, 31 and 33-36 have been rejected as unpatentable over the combination of references Wheeler in view of Iverson. Of these claims, only Claims 26 and 33 were independent. Claim 25, an independent claim, and dependent Claims 29 and 39 have been rejected as unpatentable over the combination of references Wheeler in view of Iverson in view of Sakakibara. Finally, Claims 30, 32, 37 and 38, all being dependent claims, have been rejected as unpatentable over the combination of references Wheeler in view of Iverson in view of Schofield. These rejected claims are all of the claims that were pending at the issuance of the instant Office Action, and all of these claims have been canceled. New Claims 40-49 have been added herein, including only two independent Claims 40 and 45. The cited references on which the rejections depend are discussed below in light of the rejected and now-canceled claims as

well as the new claims to show that (a) the references do not render the claims unpatentable as the Office Action argues, and (b), in any event, the new claims are patentable over the art combinations cited. Therefore, Applicants request that the rejections be withdrawn and Claims 40-49 be allowed.

1. Wheeler provides two separate embodiments: a first embodiment shown in Figs. 1-3 and a second embodiment shown in Figs. 4-6, and states that the second embodiment differs from the first embodiment in the inner surface 43 and the polymeric material layer 44. Yet, the Office Action erroneously cherry picks details from both embodiments as if they were the same structure in an attempt to find certain features of the rejected claims. Specifically, the Office Action uses the packing member 40 of the second embodiment to provide certain structures, and uses the cloth of the first embodiment with the film 44 of the second embodiment in an attempt to construct a dynamic seal. Further, the Office Action confuses features disclosed by Wheeler.

Wheeler discloses that the packing member 40 has an “inner sealing lip 41 having an inwardly-projecting annular rib 42 formed on its inner surface 43 adjacent its upper edge.” The Office Action chooses the rib 42 as a “first radially extending lip.” The rib 42 does not provide “a first radially extending lip profile affixed to an inner diameter surface of an upper end of said inner wall portion” of rejected Claims 26 and 33, or “a first lip profile affixed to an inner diameter surface of an upper end of said inner wall portion and extending radially inwardly” according to the language of the present claims. Clearly, in Wheeler the rib 42 is not a lip and is not at the upper end of the inner surface 43, and the lip 41 at the upper end of the inner surface 43 does not extend radially inwardly.

Wheeler's second embodiment includes a polymeric film 44, such as a Teflon film, that essentially covers the entire inner surface 43, and is adhered directly thereto such as by thermal fusion. The film 44 is expressly applied without the use of a cloth beneath the film, contrary to the assertion of the Office Action, and does not feature spaced-apart openings, such as the openings 39 of the first embodiment. Thus, the film 44 of the second embodiment is not a "filled composite dynamic seal" according to rejected Claims 26 and 33, or "a dynamic seal in the form of a filled composite material having an elastomer as one of its ingredients" according to the present claims.

Wheeler does not disclose the filled composite dynamic seal of the rejected claims or of the present claims. The claimed dynamic seal is in the form of a filled composite material, that is, a unitary material including two or more ingredients. Additionally, as noted above, the claimed dynamic seal exists apart from the inner wall portion, and is merely affixed to the inner wall portion. The Office Action seeks to construct the claimed seal by taking the sealing lip 41 of Wheeler's second embodiment and adding to it the cloth with a polymeric film 38 deposited thereon from Wheeler's first embodiment. The Office Action further asserts, without any express reference to Wheeler, that the relatively hard elastomeric material of the packing member (10 or 14?) fills the "pores" of the cloth to bond the cloth to the packing member body. The cloth is described as "wide-mesh," and so a definition of the "pores" on which the Office Action relies is needed. In any event, the resulting construction includes the body of the packing member holding on to the cloth on which a polymeric film has been deposited. The cloth and film 38 do not combine with the packing member body, or any part thereof, to form a composite material having two or more ingredients. The cloth remains in its original form as does the polymeric film 38. If anything, the elastomeric material of the packing

member flows through the mesh of the cloth and into the holes 39 in the film 38. But that process does not do anything but place the elastomeric material next to and possibly around the film-coated threads making up the cloth. The cloth with film deposited thereon still exists separate and apart from the elastomeric material. Having elastomer positioned within the interstices formed among the cloth threads does not form a single, composite material. Further, filling "pores" or interstices between threads in the cloth does not constitute "filled" as used in the claims, wherein "filled composite material" refers to the combining of two or more ingredients to form a single material. See paragraph [0008] of the text of the application, for example. In any event, such a construction in Wheeler does not support the claimed dynamic seal as a filled composite material separate and apart from the inner wall portion, so that the filled composite material can then be affixed to the inner wall portion. The claimed dynamic seal is in the form of one material that is a filled composite material; the two or more ingredients are combined in such a way as to form a single material. Wheeler's cloth and film 38 do not constitute such a single material, nor does the Office Action assert that they do. The Office Action attempts to form the "filled composite dynamic seal" by attaching the cloth to the seal member body. Thus, the claimed dynamic seal is not found in Wheeler on at least two counts: (1) the cloth, the film 38 and the packing member body, or a part thereof, never combine in such a way as to form a single material as is the claimed filled composite material; and (2) the cloth, the film 38 and any part of the packing member body do not form a seal as claimed apart from the packing member body part so that the actual seal can then be affixed to the packing member body part.

It is instructive to note that the Office Action uses the term "filled" in two different ways, only one of which applies here. In part 8 of the Office Action the

Office Action asserts that filling the “pores” of the cloth means that the cloth is then “filled” in the same way that a bucket can become “filled” by pouring enough water into it. That is not the meaning of the word “filled” that is used in the pertinent technology. In parts 9 and 10 of the Office Action the term “filled” is used with a different meaning. In part 9 the Office Action refers to Sakakibara and mentions “aramid fiber filled HNBR.” In fact, Sakakibara states that its rubber composition “may include fillers such as magnesium carbonate, calcium carbonate, glass fiber, aramid fiber and the like.” See column 6, lines 7-10. In part 10 the Office Action refers to Schofield and mentions “a filled PTFE” and states that the reference “teaches the PTFE can have fillers.” At that point, the Office Action even refers to column 7, lines 25-32 of Schofield. That language in Schofield is telling:

The reinforcing ring can be made from PTFE containing a variety of fillers, generally in the range from about 2% to about 60% by weight. Typical fillers that can be used in the PTFE reinforcing ring are carbon, graphite, bronze, molybdenum disulfide, ground glass or milled glass fibers, a plastic such as polyethylene sulfide, e.g. Ryton, or a poly-p-oxy benzoate plastic, e.g. Ekonol.

These references are clearly using the term “filler” or “filled” in the sense used in the present application, that is, mixing two or more ingredients together to form a single material. That process is distinctly different from producing a “filled” bucket by pouring water into it, or producing a “filled” cloth by having elastomer flow into its “pores.” The two meanings of “filled” are distinctly different and not interchangeable as the Office Action does use them. This pertinent process to mix ingredients together and make a “filled composite material” is described for the present invention in paragraph [0008] of the text.

It is further noted that in some embodiments of the claimed dynamic seal, one of the ingredients of the filled composite material is a plastic. There is no

mention in Wheeler of a plastic used to form a seal. Rejected and canceled Claims 34-39 are directed to a filled composite material including plastic as one ingredient. All of present Claims 45-49 include the dynamic seal "in the form of a filled composite material having a plastic as one of its ingredients."

Iverson is cited to provide braces 46 and 48 to replace the resilient, circular member 28 in Wheeler so that Wheeler can have "ribs" as claimed. However, the Office Action is silent on any reason as to why it would have been obvious to so modify the disclosure of Wheeler. In any event, the addition of the braces of Iverson to Wheeler does not otherwise alter the structure disclosed in Wheeler.

In view of the failure of the combination of Wheeler and Iverson, as set out in the Office Action, to provide all of the limitations of the claims rejected thereon, or of the present Claims 40-49, Applicants request withdrawal of the rejections based on these two references.

2. Sakakibara does not appear to be directed to making seals as the Office Action alleges, but rather appears to be concerned with materials for better tire production. Just because the reference teaches materials useful in that regard does not mean that it would be obvious to substitute aramid fiber filled HNBR, for example, in the disclosure of Wheeler to achieve the results desired in Wheeler. That is the test and the Office Action does not expressly address that issue. Further, adding a material from Sakakibara to the disclosure of Wheeler would still not provide the dynamic seal as claimed for the reasons stated above. Consequently, the combination of Wheeler, Iverson and Sakakibara does not provide the dynamic seal as defined in rejected Claims 25, 29 and 39, or of present Claims 44 and 49. Therefore, Applicants request withdrawal of these rejections.

3. Schofield is relied on by the Office Action to provide filled PTFE. Having another material available from a cited reference does not necessarily teach that it would be obvious to substitute that material into another reference. Again, the test is whether modifying the other reference (Wheeler) would have been obvious. In any event, simply changing the material of the film of Wheeler would still not provide the dynamic seal as defined in rejected Claims 25, 29 and 39, or of present Claims 44 and 49. Therefore, Applicants request withdrawal of these rejections.

Conclusion

Based on the foregoing analysis and the amendments to the descriptive portion of the text and to the claims, Applicants respectfully assert that the text and all Claims 40-49 are in condition for allowance. Therefore, applicants earnestly request withdrawal of all rejections and objections, and allowance of all Claims 40-49 at an early date. The total number of claims and the number of independent claims for which a filing fee has been paid are not exceeded by entry of this Amendment, and therefore no fee for additional claims is due. If anything further is required to place the entire application in condition for allowance, the examiner is respectfully requested to telephone the undersigned representative.

Respectfully submitted,



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